HAHN AND ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANTS

July 14, 2017

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Northwest Region, Portland Office
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HAI Project No. 2708 DEQ ECSI File No. 84

SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and 7200 NW Front Avenue, Portland, Oregon

Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of June 2017. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1. ACTIONS TAKEN UNDER THE VOLUNTARY AGREEMENT DURING THE PREVIOUS MONTH

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during June 2017. The DNAPL storage tank previously reached capacity with 492 gallons measured in the tank and therefore the system automatically shut-off. As of June 2017, NW Natural has been coordinating with a new vendor for management of the recovered oil / water mixture.

Tasks related to maintenance of the HC&C system and the groundwater treatment system were conducted in June 2017, with the system operating in full long-term operational mode.

A total of 8,642,073 gallons of water were treated in the on-site groundwater treatment plant and discharged during June 2017. Discharged water met all effluent criteria set by the facility's NPDES permit.

Baseline DNAPL removal as needed to maintain levels below the top of the well sumps was conducted by Anchor QEA during June 2017 in the following wells near the river shoreline.

- MW-18-30
- MW-26U
- MW-38U
- MW-PW2L
- PW-2L

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Programming of logic controllers was completed for new groundwater pumping well PW-10U during June, and active pumping from this well was initiated as part of the HC&C system operations.

Second quarter 2017 routine manual water level and DNAPL measurements were collected as part of NW Natural's routine monitoring program at the Gasco and Siltronic properties on June 30, 2017.

2. ACTIONS SCHEDULED TO BE TAKEN IN THE NEXT MONTH

NW Natural and DEQ technical working group communications and meetings will occur as needed within the next month to discuss ongoing project tasks.

Preparation of the RI/RA Addendum for the northern portion of the Siltronic property will continue during the indicated timeframe.

Routine baseline DNAPL measurements and removal will continue as needed to maintain levels below the top of the well sumps in nearshore HC&C-related wells.

The pumps for automated DNAPL recovery wells MW-6-32 and MW-13-30 will be removed during July (completed on July 5, 2017) so that DNAPL thickness measurements may be made and so that samples of DNAPL from each well location may be collected for analysis consistent with other DNAPL testing completed as part of the FS Data Gap Investigation activities at the site.

It is expected that NW Natural will coordinate with a vac-truck service during July (work conducted July 6, 2017) in an effort to evacuate the casing of the suspected former Gasco water supply well. The objective of this work is to determine the nature of the hard surface encountered at a depth of 12.2 feet bgs within the casing of this feature. Based on inconclusive results, additional vac-truck work, with different tooling capabilities, is anticipated to remobilize to the site during July for an additional attempt to remove / inspect dense materials in the steel casing of this feature.

The following upland FS related tasks will be in progress:

- Soil gas and undisturbed soil core sample locations, installed as part of the FS
 Data Gaps Investigation between March and June, will be surveyed during July
 (completed July 6. 2017).
- Outdoor air sampling activities, to be completed based on DEQ comments from review of the May 2016 Gasco Uplands Data Gaps Investigation Work Plan and subsequent communications, are expected to occur after receipt of DEQ approval of methods and locations.
- Preparations for Fill WBZ monitoring well installations proposed as part of the DNAPL Mobility FS Data Gap Investigation Work are anticipated to occur during late July or early August, contingent upon driller availability.
- Attempting to obtain DNAPL samples for laboratory testing from wells MW-6-32, MW-13-30, MW-26U, and DW-11U.
- · Laboratory reporting and data validation

3. LABORATORY TEST RESULTS RECEIVED DURING THE PREVIOUS MONTH

NW Natural receives test results on a regular basis as a result of routine monitoring related to groundwater quality or as specified by various permit requirements. Additionally, test results are periodically received through implementation of task-specific investigation activities resulting from agency-approved work plans. These data are provided to DEQ or the permitting authority (if different than DEQ) in accordance with previously-approved formats and schedules.

Some of the final lab reports from the DEQ-approved Upland Feasibility Study Data Gaps Investigation (soil, groundwater, soil gas, and DNAPL data) have been received during the previous month and are in validation. A meeting to preview preliminary draft data related to these investigation tasks is scheduled to occur with DEQ in July (conducted July 11, 2017).

4. PROBLEMS EXPERIENCED DURING THE PREVIOUS MONTH

There were no problems of significance experienced during the previous month.

Should you have any questions, please contact the undersigned.

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